Standard Information:

What's in a Number?

By utilizing statistics, the Utah Department of Workforce Services estimates industry and job growth, occupational wages and much more at the state level. These measures can be used by job seekers to make informed career decisions. For example, a job with high wages and high growth equals great opportunity.

While statistics may seem complicated, understanding a few simple concepts can equip individuals with extremely informative tools for a variety of contexts.

Statistics is simply a way to deal with and describe a quantity of data. Data can be gathered through surveys, analyzed and summarized in a distribution, such as the histogram [next page]. The histogram represents 5,497 cases of an occupation's wage. On the horizontal axis are the wages and on the vertical axis is the frequency or number of cases that fit into the interval (for example about 434 cases fall into the $5.00-8.50 per hour category).

A mean is what most people consider an average and a median is the midpoint or 50th percentile of a distribution. For the occupational distribution [right] the mean wage is $14.03 and the median is $13.49. The mean is higher because the few cases on the right hand side of the distribution drag up that number. A median is not susceptible to extreme values, which is why the median is the measure generally used for wages.

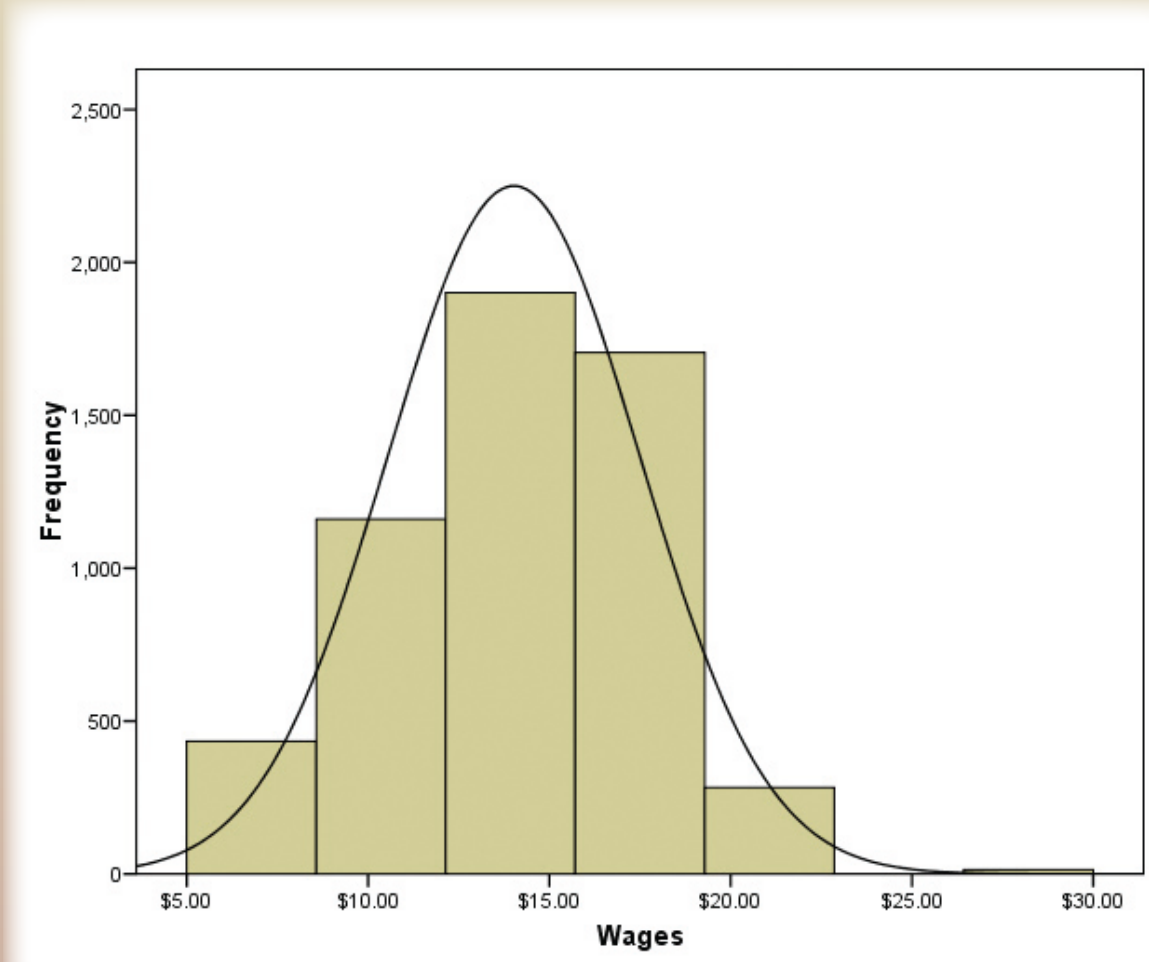
A more encompassing measure is the interquartile range. It reports two numbers that half of the distribution fall between, or the 25th and 75th percentiles. In our example 50 percent of the distribution falls between $10.61 and $17.13 per hour. With more experience, wages tend to go up and so an individual entering an occupation with little experience should expect to earn something close to the 25th percentile.

It is important to note that a single number, such as the mean or median, represents 5,497 cases. There will be thousands of cases both above and below the median, but that is the single number that best describes the distribution.

Occupational wage estimates produced by DWS are the product of three years of cumulative, systematic data collection. A single case is one among thousands and will have very little effect on the aggregate wage estimate produced for a specific occupation. These numbers are reliable because they make a general case out of individual cases. We can have more confidence in a statistic than an anecdote for that reason.

For job seekers, a career decision informed by statistics is a powerful and informed decision. All of this information and much more can be found at http://jobs.utah.gov/jsp/wi/utalmis/default.do

Example Distribution of an Occupation's Wage



Source: Utah Department of Workforce Services

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